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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/038,545

10/24/2001

Katsumi Tomioka

P/1139-107

7121

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02/08/2006

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EXAMINER

LEE, DAVID J

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/038,545	TOMIOKA, KATSUMI	
	Examiner	Art Unit	
	David Lee	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tochio (US Patent No. 6,563,613) in view of Effenberger (US Patent No. 5,930,018).

Regarding claims 1 and 5, Tochio teaches an optical subscriber system comprising: station equipment (fig. 2, 11); a plurality of subscriber units (fig. 2, 12<sub>1</sub> to 12<sub>n</sub>); a transmission line for transmitting trailing signals from the station equipment to the plurality of subscriber units and transmitting leading signals from the plurality of subscriber units to the station equipment (fig. 2, 13); and a star coupler for branching trailing signals and combing the leading signals (fig. 2, 13a), the station equipment comprising a transmission line distance monitor/processor unit (fig. 2, 11b, 23) which sends a distance measuring control signal to each of the subscriber units, and measures, based on a distance measuring signal returned from each of the subscriber units, the transmission line distance between the station equipment and each of the subscriber units (fig. 2, 11a, and col. 5, lines 50-60). Tochio also teaches that the process is for preventing collision of signals from subscriber unit stations by giving notice of the distance/transmission timing of each subscriber unit (col. 6, line 64 to col. 7, line 4). Tochio does not specifically disclose that the transmission distances are compared to a predetermined reference value in order to determine whether it is smaller or larger. However, the use of comparing transmission

Art Unit: 2633

distances to a predetermined reference value in order to determine and arrange units so as to prevent collisions is well known in the art. For example, Effenberger teaches an optical subscriber system which measures the distances to each subscriber unit and orders the subscriber units in ascending order, from smallest to largest (col. 3, lines 14-24 and see also fig. 3; in this case, the reference value would be the previously measured value that is used in comparison to sort the units in ascending order; see also "Response to Arguments" section below). It would have been obvious to one of ordinary skill in the art at the time of invention to compare the distances to a predetermined reference value, as taught by Effenberger to determine whether the distance is smaller or larger in order to effectively sort the units to prevent collisions in the system of Tochio, thereby optimizing transmission performance.

Regarding claims 2 and 6, the combined invention of Tochio and Effenberger teaches the station equipment further comprising a trailing signal multiplexer (fig. 2, 26 and col. 6, lines 8-11 of Tochio) and a leading signal separator (fig. 2, 26 and col. 6, lines 12-15 of Tochio) and functions to multiplex the distance measuring equipment signal, generated in the transmission line distance monitor/processor unit, in the trailing signal multiplexer to prepare a trailing signal, which is then sent to each of the subscriber unit, (col. 6, lines 8-11) and to separate, from a leading signal returned from each of the subscriber units, a distance measuring signal, in the leading signal separator (col. 6, lines 12-15), which is then sent to the transmission line distance monitor/processor unit (col. 6, line 14-15).

Regarding claims 3 and 7, the combined invention of Tochio and Effenberger teaches that the transmission line distance monitor/processor unit comprises a distance measuring control signal generator (fig. 5, 23a and col. 8, lines 27-30), a distance measuring section (fig. 2, 23 and

Art Unit: 2633

col. 5, lines 58-60), and a distance judgment section (fig. 3 of Effenberger), and the distance measuring control signal generated in the distance measuring control signal generator is multiplexed in the trailing signal multiplexer to prepare a trailing signal (fig. 2, 26 and col. 6, lines 8-11), which is then sent to each of the subscriber units, and a distance measuring signal is separated from a leading signal, returned from each of the subscriber units, in the leading signal separator to prepare a distance measuring signal (fig. 2, 26, and col. 6, lines 12-15) that is then input into the distance measuring section (col. 6, line 14-15) which sends a distance signal to the distance judgment section for judging whether the transmission line distance is larger or smaller than a predetermined reference value.

Regarding claims 4, and 8-12, the combined invention of Tochio and Effenberger discloses that the optical subscriber system which, when the transmission line distance is larger than the reference value, issues an alarm (“gives notice of” – col. 7, line 2 of Tochio).

### ***Response to Arguments***

3. Applicant's arguments filed on 11/17/2005 have been fully considered but they are not persuasive.

Examiner interprets the “reference value” of claims 1 and 5 not as a single value for every distance measurement, but as a relative value as a basis for determining whether a given distance is smaller or larger, i.e. – “*each* of the subscriber units measures ... and judges whether the transmission line distance is larger or smaller than a predetermined reference value.” In addition, applicant has disagreed with examiner's position that the reference value of Effenberger is the value used in comparison to the measured value when sorting the units (3<sup>rd</sup>

Art Unit: 2633

paragraph of applicant's remarks). In response, however, applicant merely cites how Effenberger's OLT communicates with each of its ONUs, without differentiating how the instant invention reads over Effenberger. Applicant's arguments regarding this issue fail to comply with 37 CFR 1.111(b) because it amounts to a general allegation that the limitation defines a patentable invention without specifically pointing out how the language of the claim patentably distinguishes it from the references. Examiner maintains that a reference value is used while sorting the ONUs with respect to distance measurements.

Applicant also argues that Effenberger does not teach the use of a "*predetermined* reference value." After careful consideration, examiner must respectfully disagree. Effenberger teaches an optical subscriber system which measures the distances to each subscriber unit and orders the subscriber units in ascending order, from smallest to largest. As stated in the rejection above, the reference value would be the value that is used in comparison to the measured value when sorting the units. Applicant's attention is directed to Figure 1 of Effenberger. When sorting units  $ONU_1$  to  $ONU_4$  (step 304 of fig. 2), the controller takes the distance of a previously measured ONU (for example,  $ONU_1$ ) and compares it to the unit in question (for example,  $ONU_2$ ). In this example, the distance of  $ONU_1$  serves as a reference value in determining the placement of  $ONU_2$  (i.e. - whether it is "larger or smaller" than  $ONU_1$ ), and this distance would of course have to have been already previously measured in order to provide a comparison to  $ONU_2$ . Examiner interprets this previously measured reference value to be a "*predetermined* reference value."

As stated in the previous office action, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van*

Art Unit: 2633

*Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It is the examiner's position that the combined invention of Tochio and Effenberger clearly reads upon the limitations of the instant invention, noting that the claim language fails to convey a patentable distinction from the references in regards to "judg[ing] whether the transmission line distance is larger or smaller than a predetermined reference value."

4. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

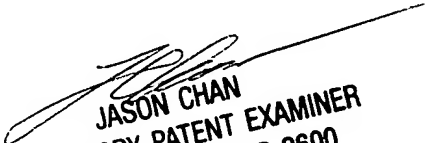
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lee whose telephone number is (571) 272-2220. The examiner can normally be reached on Monday - Friday.

Art Unit: 2633

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

  
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